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Volker Kronseder

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EXAMINER

HARP, WILLIAM RAY

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,046	<b>Applicant(s)</b> KRONSEDER ET AL.	
	<b>Examiner</b> William R. Harp	<b>Art Unit</b> 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/1/2006 and 6/17/2008</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statements (IDS) were submitted on August 1, 2006 and June 17, 2008. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

### ***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "2" and "24" have both been used to designate a carriage.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "23" has been used to designate both a chain link and guide rollers.
5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "74" has been used to designate both guide rollers and a tension spring.
6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

7. Claim 8 recites the limitation "the connection line" in Line 4. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 9 recites the limitation "the intermediate areas" in Line 5. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 12 recites the limitation "the parallel guide rails" in Line 2. There is insufficient antecedent basis for this limitation in the claim.
10. Claim 23 recites the limitation "the roller chain" in Line 4. There is insufficient antecedent basis for this limitation in the claim.
11. Claim 27 recites the limitation "the guide rails" in Line 2 and "the roller chain" in Line 2. There is insufficient antecedent basis for these limitations in the claim.
12. Claim 36 recites the limitation "the roller chain" in Line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 112***

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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14. Claims 1, 8, 9, 13, 17-22, 24-26, 28, 31-38, 40-48, 51, and 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15. Regarding Claims 1, 17-20, 22, 28, 32-35, 38, and 40, the recitation "can be" is used frequently. The language is indefinite because it suggests alternatives and does not set forth a positive limitation. It is recommended that the claims be amended to eliminate any ambiguity.

16. Regarding Claims 4 and 31, the recitation "adapted to" suggests alternatives and does not set forth a positive limitation.

17. Regarding Claim 8, the claim recites "each structural unit" in Line 3. Previously, the claim recited "a structural unit". It is unclear if the scope of the claim covers one structural unit or multiple structural units.

18. Regarding Claim 9, the claim recites "input station and output station with arc-shaped deflection". It is unclear if the recited deflections are a positive limitation. It is also unclear if the recited deflections differ from the deflections recited in Claim 1 or are the same deflections.

19. Regarding Claim 13, the claim suggests alternatives (substantially horizontally or substantially vertically) and is therefore indefinite.

20. Regarding Claim 21 and 25, the recitation "which allows pivoting" is indefinite because it suggests alternatives and does not set forth a positive limitation.

21. Regarding Claims 24 and 37, the claims recite two sets of alternatives (slanted ramps, wedges and guide roller, thrust blocks, ratchets) which make the claims indefinite. The examiner considers the claims to claim slanted ramps in cooperation with thrust blocks for purposes of examination with regards to prior art.

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22. Regarding Claim 26, the claim fails to identify the claim upon which it is dependent, and is therefore indefinite, and has not been treated with regards to the prior art.

23. Regarding Claim 36, the claim recites “the roller chain” in Line 3 and then recites “the optional roller chain” in Line 5. It is unclear if the roller chain is positively claimed.

24. Regarding Claim 38, the claim recites alternatives (deflections or guide arcs) which make the claim indefinite. The examiner considers the deflections to be claimed with regards to the prior art.

25. Regarding Claim 51, the claim recites alternatives (circular, oval, spiral, or coil) which make the claim indefinite. The examiner considers the curve shape to be circular with regards to the prior art.

26. Regarding Claim 52, the claim recites alternatives (snap-on connection or ratchet) which make the claim indefinite. The examiner considers the claim to recite the ratchet with regards to the prior art.

27. Regarding Claims 41-48, the claims are indefinite because it is not clear what the applicants are claiming, a link chain, or a device for dynamic storage of objects. It is recommended that the claims be amended to clearly point out the scope of the claim.

### ***Claim Rejections - 35 USC § 103***

28. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

29. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

30. Claims 1, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf (USPN 6591963) in view of EPO Document (EP 1295820 B1, hereafter '820).

31. Regarding Claims 1,4, and 6, Wipf teaches a device for dynamic storage of objects comprising: an endless flexible conveying means (1), a conveying strand (10, 10'), and idle strand (11, 11'), each having areas of variable length [C3, L19-24], a carriage (2) having a first deflection (21) and a second deflection (21'), a first and second drive device (4, two shown in Figure 1) which are independently driven at variable speeds [C3, L10-24]. Wipf further teaches an input station and an output stations [C2, L38-42]. Wipf fails to teach grippers. '820 teaches grippers (20) used in a temporary storage device. The grippers engage the necks of the containers [C3, L41-43]. '820 further teaches that the grippers are fixed [C3, L40-43], which is considered to be rigidly mounted. It would have been obvious to use grippers in a storage device to grip the articles being conveyed as is known in the art to convey objects having neck portions.

32. Claims 2, 3, 5, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf in view of '820 as applied to claim 1 above, and further in view of Pickel et al. (USPN 6354427).

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33. Regarding Claims 2, 3, 5, and 49, Wipf in view of '820 teaches the limitations described above, fails to teach the operation of the grippers. Pickel et al. teaches grippers (6) that are controllable [C3, L16-19] and clamps (24), which the examiner also considers to be grippers, which are passive [C4, L18-29]. Pickel et al. further teaches the bottle is held in a form fitting manner and also by frictional engagement [C3, L9-15], which the examiner considers to be a positive lock and a friction lock. It would have been obvious to use passive or active grippers as a design consideration.

34. Claims 7-9 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf in view of '820 as applied to claim 1 above, and further in view of Santais et al. (USPN 5863571).

35. Regarding Claims 7-9 and 50, Wipf in view of '820 teaches the limitations described above. Wipf further teaches deflections (32) in the area of the input and output station, yet fails to teach movable grippers and structural units. Santais et al. teaches movable grippers (73, 74) that are combined to form a structural unit (72). Each structural unit is pivotable (around pivot pin 71) and, as illustrated in Figure 2, is pivoted through several positions. The structural units are arranged on extension arms (70). The structural units are pivotable to facilitate transfer of the objects [C7, L64-C8, L7]. It would have been obvious to arrange grippers in a pivotable structural unit to facilitate transportation of objects on the conveyor and transfer of objects to and from the conveyor. Further, it would have been obvious that the angular position of the structural units would be a design consideration with the level of ordinary skill.



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36. Claims 10-13 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf in view of '820 as applied to claim 1 above, and further in view of Clopton (USPN 5076422).

37. Regarding Claims 10-13 and 51, Wipf teaches a link chain [C2, L35] and teaches a circular curve shape deflection in the area near the carriage. Wipf further teaches the conveyor frame (3) can be arranged vertically [C3, L4-7], yet fails to teach guide rollers and at least one guide rail. Clopton teaches a link chain with guide rollers (20, 22, 24, and 26) and parallel guide rails (62, 62A). It would have been obvious to use a link chain with guide rollers and guide rails as is known in the art.

38. Claims 14, 15, 19, 20, 23, 24, 28, 29, 33, 34, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf in view of '820 and Clopton as applied to claim 10 above, and further in view of Leemkuil (USPN 5191959).

39. Regarding Claims 14, and 28, Wipf in view of '820 and Clopton teaches the limitations described above, yet fails to teach a moveable guide roller. Leemkuil teaches a movable guide roller (35). It would have been obvious to use a moveable guide roller to maintain its position against the guide rail.

40. Regarding Claims 15, 19, 20, 29, 33, and 34, Wipf in view of '820 and Clopton teaches the limitations described above, yet fails to teach a movable guide roller impinged by a spring element, a guide roller mounted by means of a bolt, or a guide roller coupled to a thrust block. Leemkuil teaches a movable guide roller (35) with a thrust block (37), which rides against a stationary guide rail (94). This arrangement allows the guide roller to move parallel to its rotation axis, while allowing the element (15) from being displaced vertically. Leemkuil teaches

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that the roller is mounted on the lower end of a shaft (22) [C3, L15-17]. It is well known that a bolt is used to secure elements together and therefore, could have been used to mount the roller to the shaft. It would have been obvious to use a moveable guide roller coupled to a thrust block and impinged by a spring element to allow for lateral motion of the conveyor chain.

41. Regarding Claim 23 and 36, Wipf in view of '820 and Clopton teaches the limitations described above. Wipf further teaches guide arcs (as illustrated in Figure 1) on the carriage.

Wipf further teaches [C3, L44-48] that the conveying means is released from the carrier elements for simplified deflection. It would have been obvious to engage and disengage the roller chain from the guide rails to facilitate deflection of the roller chain.

42. Regarding Claims 24 and 37, Wipf in view of '820 and Clopton teaches the limitations described above, yet fails to teach a slanted ramp. Leemkuil teaches a slanted ramp (94) working in cooperation with the thrust block (37). It would have been obvious to use a slanted ramp to facilitate deflection of the thrust block.

43. Claims 14, 16, 28, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf in view of '820 and Clopton as applied to claim 10 above, and further in view of Zurcher (US Pub 2002/0053499 A1).

44. Regarding Claims 14, 16, 28, and 30, Wipf in view of '820 and Clopton teaches the limitations described above, yet fails to teach a moveable guide roller connected by a pivotable lever. Zurcher teaches a movable guide roller (15) that is connected by a pivotable lever (210). It would have been obvious to use a pivotable lever along with a moveable guide roller to maintain contact between the roller and the guide rail.

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45. Claims 25 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf in view of '820, Clopton, and Leemkuil as applied to claims 23 and 36 above, and further in view of Steeber et al. (USPN 6230874).

46. Regarding Claims 25 and 38, Wipf in view of '820, Clopton, and Leemkuil teaches the limitations described above. Wipf further teaches the deflections (21, 21') are arranged on a common frame (20), yet fails to teach pivoting and track rollers. Steeber et al. teaches a frame (30). The components of the frame are pivotally mounted to provide relative movement between the components as the frame moves through curves defined by the conveyors [C2, L47-64]. Steeber et al. further teaches bearing members (90) that ride in guide channels [C7, L34-36]. It would have been obvious to arrange the deflections in a pivotable manner on a frame along with rollers to facilitate deflection of the objects when the carriage moves through curved sections.

47. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf in view of '820 as applied to claim 1 above, and further in view of Barth et al. (USPN 6394260).

48. Regarding Claim 27, Wipf in view of '820 teaches the limitations described above yet fails to teach guide rails or parallel round rods. Barth et al. teaches guide rails (28, 30) that are parallel round rods (Figure 5). It would have been obvious to use parallel round rods as guide rails to facilitate transport of the objects through horizontal and vertical curves.

49. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf in view of '820, Clopton, and Leemkuil as applied to claim 28 above, and further in view of Fellner et al. (USPN 4513858).

50. Regarding Claim 39, Wipf in view of '820, Clopton, and Leemkuil teaches the limitations described above, yet fails to teach a tension element. Fellner et al. teaches an accumulator

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conveyor system. Fellner et al. further teaches a tensioning element (91T). Fellner et al. further teaches that it is important to prevent slack in the conveying means to ensure that the drive power is transmitted effectively [C5, L46-51]. It would have been obvious to use a tension element to ensure that the drive power is transmitted effectively.

***Allowable Subject Matter***

51. Claim 17, 18, 21, 22, 31, 32, 35, 40, and 52 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

52. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to anticipate or fairly suggest a pivoted lever detachable from a guide rail, a control device to reset the pivot lever, a pivotable double lever, double levers pivoted in a scissor-like manner, a snap-on connection or a ratchet.

***Conclusion***

53. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art is directed to accumulator conveyor systems, gripper assemblies, and link chains.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William R. Harp whose telephone number is (571) 270-5386. The examiner can normally be reached on Monday - Thursday, 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gene Crawford/  
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